

## DESCRIPTION OF *PINELEMA BAILONGENSIS* GEN. NOV. ET SP. NOV. (ARANEAE, TELEMIDAE) FROM GUANGXI, CHINA

WANG Chun-Xia, LI Shu-Qiang\*

Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China

**Abstract** A new genus, *Pinelema* gen. nov., is proposed for the species *Pinelema bailongensis* sp. nov. from a cave in Guangxi, China. This new genus can be distinguished from other genera by the different shapes of lorum and lateral abdominal plates; and the tube-shaped embolus, with the distal part weakly sclerotized in the male. Type specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing (IZCAS).

**Key words** Taxonomy, telemid, new genus.

### 1 Introduction

The family Telemidae was established by Fage in 1913 for a tiny eyeless spider *Telema tenella* Simon, 1882 from France. The family includes small (1.0–2.0 mm), three-clawed, ecribellate haplogygne spiders and is remarkable for the presence of sclerotized lorum and lateral abdominal plates. They are usually found under rocks, in leaf litter, or in caves (Song *et al.*, 1999). Up to now, 7 genera and 60 species have been recorded (Platnick, 2011) from tropical Africa, Europe, East Asia, and Southeast Asia to North and Central America (Brignoli, 1977).

The current paper describes and illustrates a new telemid genus and species from Southern China, *Pinelema bailongensis* gen. nov. et sp. nov., which was collected from a cave in Pingguo County of Guangxi Zhuang Autonomous Region.

### 2 Material and Methods

The specimens used in this study are deposited in the Institute of Zoology, Chinese Academy of Sciences (IZCAS), Beijing, China. All specimens were examined and measured using a LEICA M205 C stereomicroscope. Further details were studied under an Olympus BX41 compound microscope. All illustrations have been made using a drawing instrument attached to Olympus BX41 compound microscope, and then inked on ink jet plotter paper. The genitalia were examined and illustrated after they were dissected from the spiders' bodies. Vulvae of female was removed and treated in lactic acid before

illustration. Left palp of male spider was illustrated. Type specimens were reserved in 80 % ethanol solution. Photos were taken with an Olympus C7070 wide zoom digital camera (7.1 megapixels) mounted on an Olympus SZX12 stereomicroscope. The images were montaged using Helicon image stacking software. All measurements are made under an Olympus BX41 compound microscope and given in millimeters. Only holotype and a paratype are used in measurements. Leg measurements are shown as: total length (femur, patella, tibia, metatarsus, tarsus). The following abbreviations are used: AME, ALE for anterior median eyes, anterior lateral eyes; CA, EM and SP for cymbial apophysis, embolus and spermatheca.

### 3 Taxonomy

#### Telemidae Fage, 1913

##### *Pinelema* gen. nov.

Type species. *Pinelema bailongensis* sp. nov.

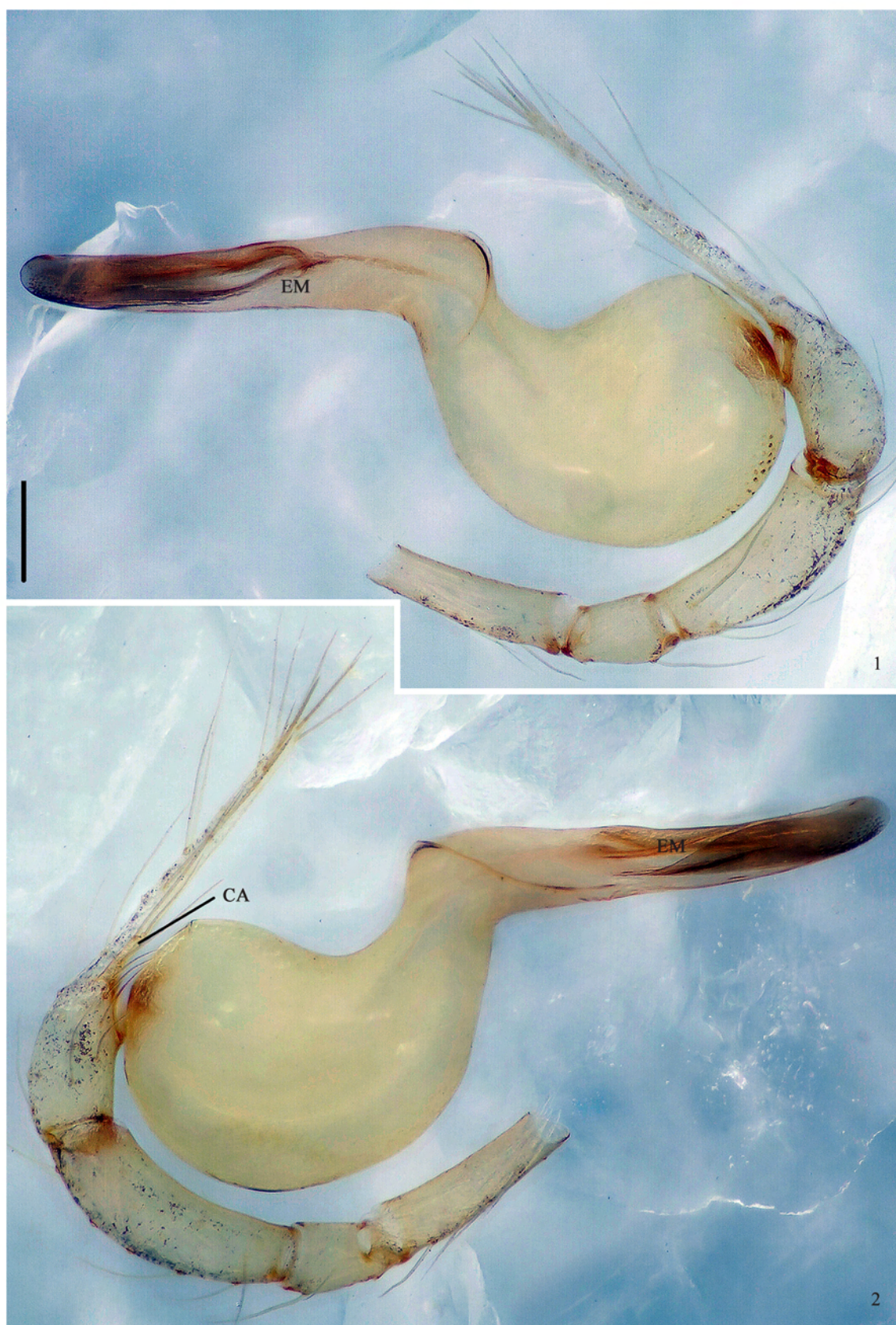
**Etymology.** The generic name is derived from the syllable “Pin”, referring to Pingguo County (type locality) and the “-elema” as part of the genus *Telema*. Feminine in gender.

**Diagnosis.** This new genus can be distinguished from other genera by the wide labium; the distinct shape of lorum and lateral abdominal plates in the male (Figs 15–16); the simple male copulatory organ; the presence of a single cymbial apophysis on prolateral surface of palp tarsus (Figs 2, 9), the tube-shaped, distally less sclerotized embolus (Figs 1–2, 4, 9–10, 17).

\* Corresponding author, E-mail: lisq@ioz.ac.cn

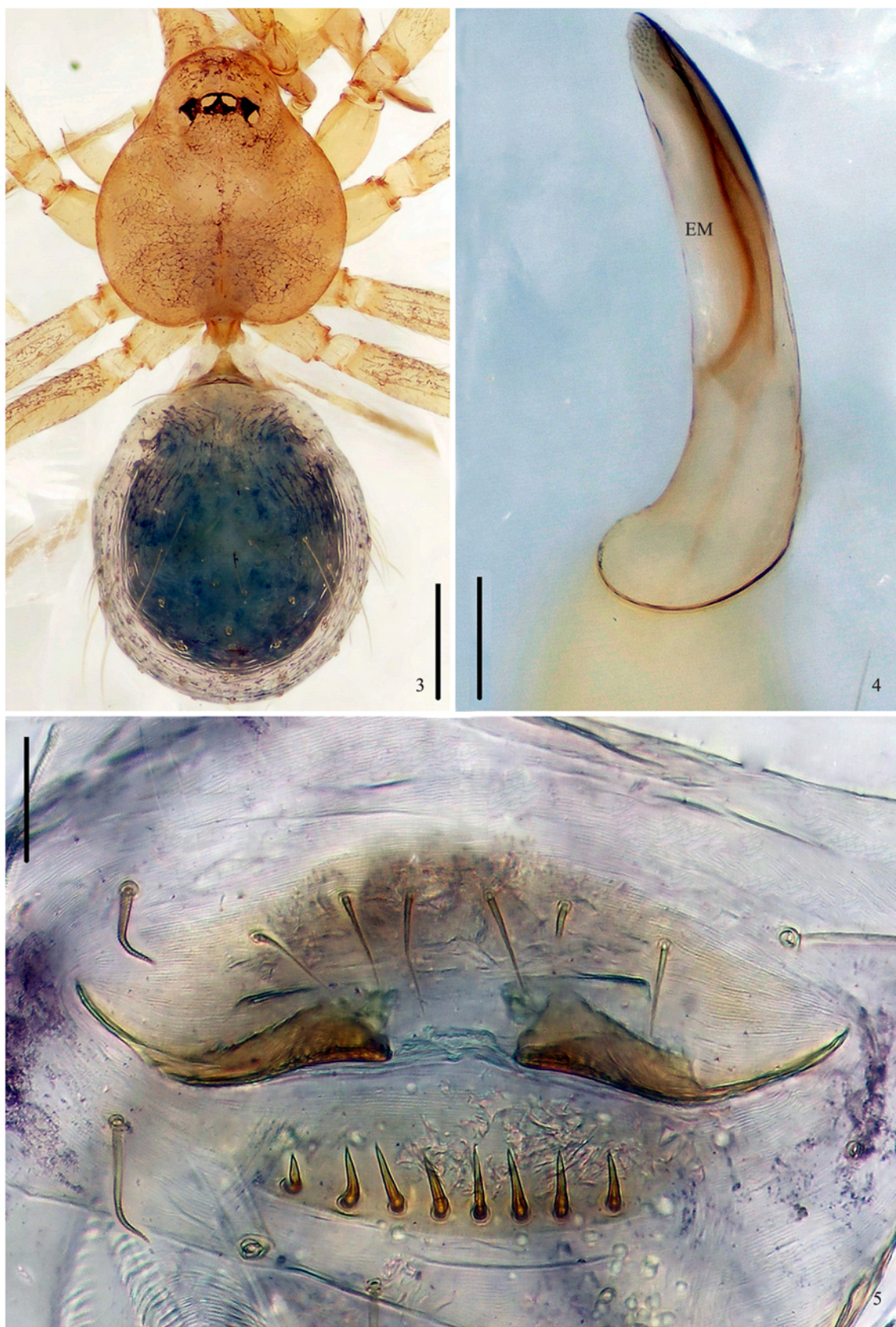
This study was supported by China National Funds for Distinguished Young Scientists-31025023 and the National Natural Sciences Foundation of China (30870271).

Received 25 Nov. 2011, accepted 14 Dec. 2011.



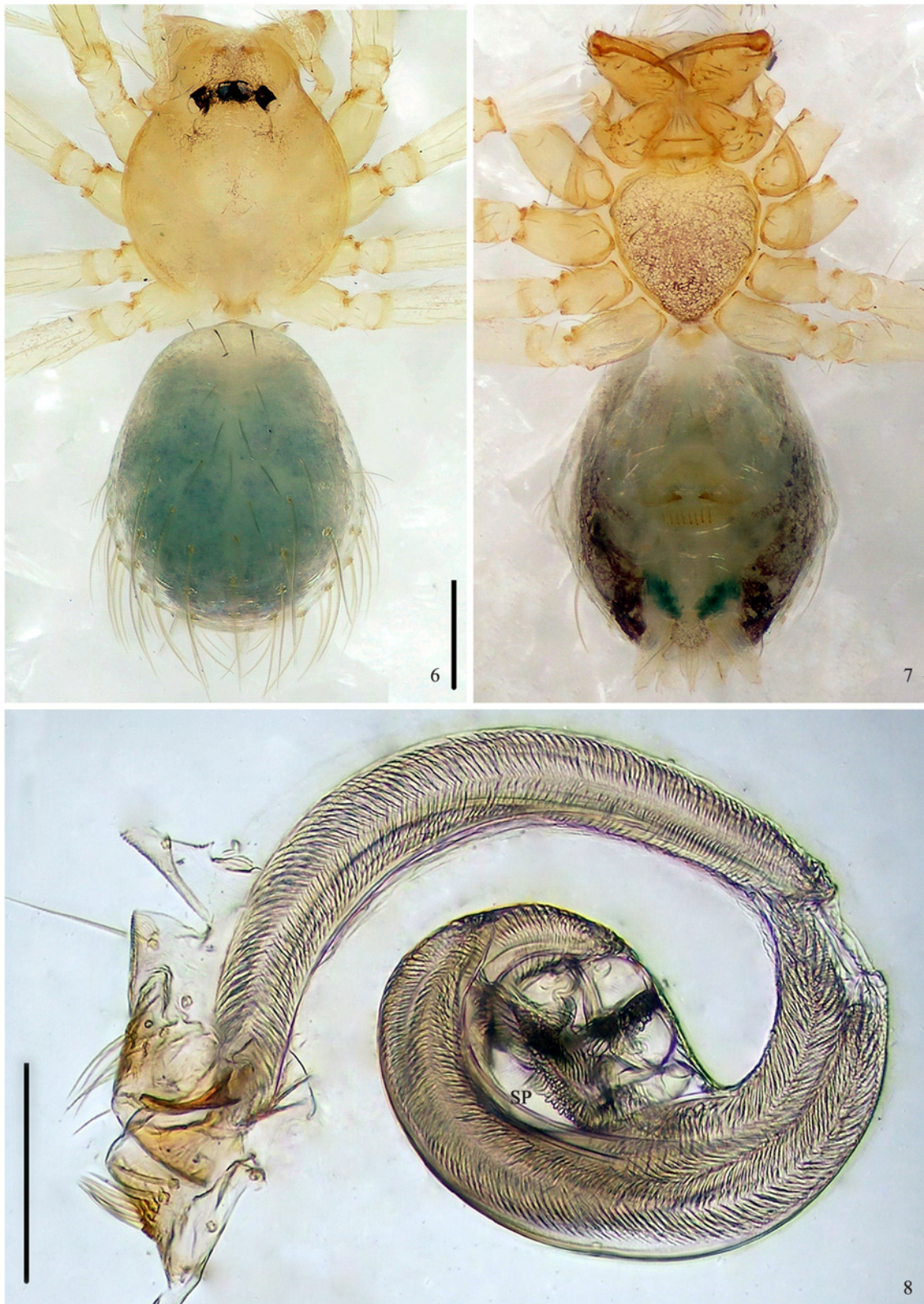
Figs 1 – 2. *Pinelema bailongensis* sp. nov., male holotype, palp. 1. Retrolateral view. 2. Prolateral view. Scale bar = 0.1 mm.





Figs 3 -5. *Pinelema bailongensis* sp. nov. 3 -4. Male holotype. 5. Female paratype. 3. Habitus, dorsal view. 4. Embolus, apical view. 5. Genitalia, ventral view. Scale bars: 3 = 0.25 mm, 4 = 0.1 mm, 5 = 0.5 mm.

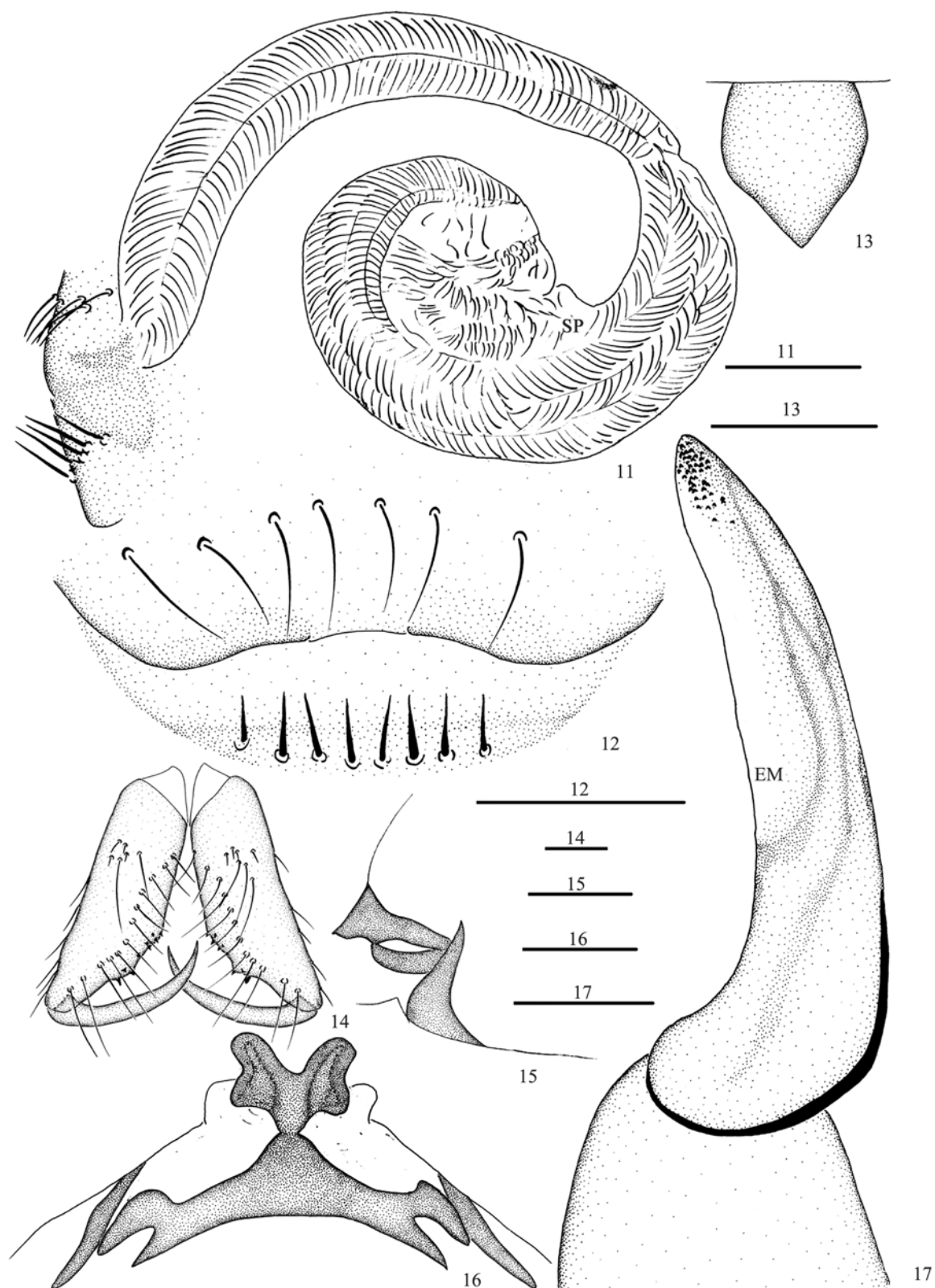




Figs 6 – 8. *Pinelema bailongensis* sp. nov., female paratype. 6. Habitus, dorsal view. 7. Habitus, ventral view. 8. Genitalia, lateral view. Scale bars: 6 – 7 = 0.25 mm, 8 = 0.05 mm.



Figs 9 – 10. *Pinelema bailongensis* sp. nov., male holotype, palp. 9. Prolateral view. 10. Retrolateral view. Scale bar = 0.10 mm.



Figs 11 – 17. *Pinelema bailongensis* sp. nov. 11 – 12. Female paratype. 13 – 17. Male holotype. 11. Genitalia, lateral view. 12. Genital area, ventral view. 13. Colulus, ventral view. 14. Chelicerae, posterior view. 15. Lorum and lateral abdominal plates, lateral view. 16. Lorum and lateral abdominal plates, dorsal view. 17. Embolus, apical view. Scale bars = 0.10 mm.



Description. See species description.

Distribution. China.

***Pinelema bailongensis* sp. nov.** (Figs 1 – 17)

Description. Male (Fig. 3). Total length 1.75. Prosoma 0.70 long, 0.59 wide. Sternum 0.37 long, 0.34 wide. Opisthosoma 0.78 long, 0.65 wide. Clypeus 0.1 high, decorated with a pair of setae. Prosoma yellowish-brown, pear-shaped, with modified net-shaped pattern and a pair of setae at the retrolateral side of eyes. Six eyes, anterior row of four eyes slightly recurved; AME close together, nearly toughing, separated from ALE by quarter diameter of ALE; laterals contiguous. Labium wider than long (Fig. 7). Chelicerae (Fig. 14) brown, with two teeth and three tiny granulous denticles on the promargin, and four small triangular teeth on the retromargin. Leg measurements: I 5.02 (1.50, 0.25, 1.60, 1.05, 0.62); II 4.48 (1.37, 0.25, 1.37, 0.87, 0.62); III 3.34 (1.00, 0.22, 1.00, 0.62, 0.50); IV 4.30 (1.25, 0.25, 1.35, 0.85, 0.60). Leg formula: I - II - IV - III. Patellae I - IV with one long seta on the distal part of dorsal surface. Tibia I - IV with one long seta on the middle part of dorsal surface. Colulus (Fig. 13) longer than wide, pentagonal-shaped. Opisthosoma greenish-black, covered with long setae. Male palpal tibia with one trichobothrium on the middle part of dorsal surface; tarsus with one cymbial apophysis prolaterally; bulb yellowish, ovoid; embolus long, tube-shaped, tapered to a point, with the distal part weakly sclerotized (Figs 1 - 2, 4, 9 - 10, 17).

Female (Figs 6 - 7). Total length 1.60. Prosoma 0.70 long, 0.55 wide. Sternum 0.39 long, 0.34 wide. Opisthosoma 0.78 long, 0.63 wide. Same coloration and ornaments as in male. Leg measurements: I 4.99 (1.50, 0.25, 1.62, 1.00, 0.62); II 4.17 (1.37, 0.25, 1.25, 0.75, 0.55); III 2.97 (0.95, 0.22, 0.80, 0.55, 0.45); IV 4.05 (1.35, 0.25, 1.20, 0.75, 0.50). Leg formula: I -

II - IV - III. Genital area (Figs 5, 12) weakly sclerotized, with a row of setae on epigynial plate and a row of stout setae at posterior of epigastric furrow. Spermatheca (Figs 8, 11) tube-shaped, curving ventrally.

Diagnosis. This new species is similar to *Telema cordata* Wang et Li, 2010, but can be distinguished by the presence of four small triangular teeth on the retromargin of chelicerae (with three small triangular teeth in *T. cordata*); the male palp bulb ovoid (heart-shape in *T. cordata*); the long cymbial apophysis of male palp tarsus is four times of *T. cordata*.

Holotype ♂, China, Guangxi, Baise City, Pingguo County, Bailong Cave (23°19'N, 107°34'E; alt. 111 m), temp. 23 °C, hum. 92 %, 1 Aug. 2009, leg. WANG Chun-Xia and YAO Zhi-Yuan. Paratypes: 20 ♂♂, 34 ♀♀, same data as holotype.

Etymology. The specific name refers to the type locality; adjective.

Distribution. Known only from the type locality.

## REFERENCES

- Brignoli, P. M. 1977. Two new spiders from Sumatra (Araneae, Telemidae and Ochyroceratidae). *Zoologische Mededelingen* (Leiden), 50: 221 - 229.
- Fage, L. 1913. Etudes sur les Araignées cavernicoles. II. Revision des Leptonetidae. In: *Biospélogica*, X X IX. *Archiv de Zoologie Expérimentale et Générale*, 10 (5): 479 - 576.
- Platnick, N. I. 2011. The world spider catalog, version 12.0. American Museum of Natural History, online at <http://research.amnh.org/entomology/spiders/catalog/index.html> (accessed 21 Nov. 2011).
- Simon, E. 1882. Etudes Arachnologiques. 13e Mémoire. XX. Descriptions d'espèces et de genres nouveaux de la famille des Dysderidae. *Annales de la Société Entomologique de France*, 2: 201 - 240.
- Song, D-X, Zhu, M-S and Chen, J 1999. The Spiders of China. Hebei Science and Technology Publishing House, Shijiazhuang. 640 pp.
- Wang, C-X and Li, S-Q 2010. New species of the spider genus *Telema* (Araneae, Telemidae) from caves in Guangxi, China. *Zootaxa*, 2 632: 1 - 45.

## 中国广西白龙平莱蛛新属新种记述 (蜘蛛目, 泰莱蛛科)

王春霞 李枢强\*

中国科学院动物研究所 北京 100101

**摘要** 记述我国泰莱蛛科 1 新属 1 新种, 白龙平莱蛛 *Pinelema bailongensis* gen. nov. et sp. nov.。模式标本保存在中国科学院动物研究所。

**平莱蛛属, 新属 *Pinelema* gen. nov.**

与该科其它属的主要区别在于下唇宽大于长; 雄性腹柄

与腹侧板形状特异; 雄性触肢跗节前侧面仅具 1 突起; 雄性触肢生殖球结构简单, 插入器管状, 逐渐向端部变细, 尖端角质化。

词源: 新属属名由模式产地平果县以及近似属泰莱蛛属组合而成。

\* 通讯作者, E-mail: lisq@ioz.ac.cn

白龙平莱蛛, 新种 *Pinelema bailongensis* gen. nov. et sp. nov. (图 1 ~ 17)

新种近似心状泰莱蛛 *Telema cordata* Wang et Li, 2010, 但新种螯沟后缘具 4 个颗粒状的小齿, 后者仅具 3 个; 新种生殖球卵形, 后者心形; 新种触肢跗节前侧面突起较长, 是后

关键词 分类, 泰莱蛛, 新属.

中图分类号 Q959.226

者的 4 倍。

正模 ♂, 广西壮族自治区百色市平果县白龙洞, 2009-08-01, 王春霞、姚志远采。副模: 20 ♂♂, 34 ♀♀, 同正模。

词源: 新种种名以模式产地白龙洞命名。